Precipitation records near Independence, Cal., 1908–09.

Number of gage.	Station.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Total.
		Ins.	*Ins.*	*Ins.*	*Ins.*	*Ins.*	*Ins.*	*Ins.*	*Ins.*	*Ins.*	*Ins.*	*Ins.*	*Ins.*	*Ins.*
1	Taboose	(0.84)	0.14	T.	0.16	3.51	3.00	0.23	0.22	0.00	0.00	0.06	(0.20)	8.30
2	do	(0.85)	0.06	(T.)	0.15	4.52	3.22	0.24	T.	0.00	0.00	0.00	(0.05)	9.09
3	do	(0.85)	0.04	(T.)	0.27	4.85	4.02	0.28	0.04	0.00	0.00	0.00	(0.05)	10.40
4	do	(5.90)	0.05	(T.)	0.26	6.32	3.77	0.37	0.02	0.00	0.00	0.00	(0.05)	11.74
5	do	(0.95)	0.12	(0.10)	0.28	8.93	5.23	0.80	0.02	0.00	0.00	0.00	(0.10)	16.53
6	do	(1.00)	(0.17)	(0.15)	(0.12)	(12.69)	7.49	1.42	0.05	0.00	0.00	0.00	(0.15)	23.24
7	Oak	(0.85)	(0.04)	T.	0.19	3.44	2.52	0.12	0.02	0.00	0.00	0.00	0.04	7.22
8	do	(0.85)	(0.05)	T.	0.21	4.65	3.06	0.36	0.00	0.00	0.00	0.00	0.06	9.24
9	do	(0.90)	(0.08)	T.	0.25	5.89	3.49	0.71	0.00	0.00	0.00	0.00	0.05	11.35
10	do	(0.95)	(0.10)	0.08	0.25	7.69	4.62	0.71	0.00	0.00	0.00	0.00	0.07	14.47
11	do	(1.00)	(0.15)	0.23	0.31	11.49	6.61	1.68	0.02	0.00	0.00	0.00	0.15	21.04
12	Bairs	(0.85)	T.	(T.)	0.22	1.53	1.53	0.15	T.	0.00	0.00	0.00	T.	4.28
13	do	(0.85)	T.	(T.)	0.26	2.67	2.06	0.15	0.00	0.00	0.00	0.00	0.10	6.09
14	do	(0.90)	T.	(T.)	0.27	3.48	2.56	0.29	0.00	0.00	0.00	0.00	0.13	7.63
15	do	(0.95)	0.14	(0.10)	0.29	5.05	4.36	0.63	T.	0.00	0.00	0.00	0.15	11.67
16	do	(1.00)	0.28	(0.15)	0.29	6.43	4.98	1.06	0.07	0.00	0.06	0.00	0.14	14.34
U.S. Weather Bureau, at Independence		0.84	0.03	0.01	0.20	3.27	2.73	0.16	0.12	T.	T.	0.00	0.25	7.61

Values in parentheses are estimated by C. H. Lee.

Baker Creek near Big Pine.
Big Pine Creek near Big Pine.
Birch Creek near Tinemaha.
Tinemaha Creek near Tinemaha.
Taboose Creek near Tibbetts.
Goodale Creek near Tibbetts.
Division Creek near Tibbetts.
Sawmill (Eight Mile) Creek near Independence.
Thibaut Creek near Independence.
Oak Creek near Independence.
Independence Creek near Independence.
Shepards Creek near Thebe.
Bairs (Moffit) Creek near Independence.
Georges Creek near Thebe.
Lone Pine Creek near Lone Pine.
Tuttle Creek near Lone Pine.
Cottonwood Creek near Olancha.
Ash Creek near Olancha.

The following table shows the mean yearly discharge of the Owens River and its principal tributaries:

Gaging stations.	1904	1905	1906	1907	1908
	Sec.-ft.	*Sec.-ft.*	*Sec.-ft.*	*Sec.-ft.*	*Sec.-ft.*
Owens River near Round Valley	287.0	216.0	358.0	381.0	241.0
Rock Creek near Round Valley	40.3	26.2	63.7	60.0	31.0
Pine Creek near Round Valley	34.0	16.6	44.4	46.7	14.7
Bishop Creek near Bishop	111.0	83.5	166.0	12.6	78.7
Big Pine Creek near Big Pine	49.1	53.5	.....	58.0	40.0
Taboose Creek near Tibbetts	.....	.....	12.1	9.5	5.1
Goodale Creek near Tibbetts	.....	.....	6.0	5.9	3.9
Division Creek near Independence	.....	.....	9.7	10.2	7.1
Oak Creek near Independence	.....	.....	35.0	22.7	15.0
Independence Creek near Independence	.....	15.1*	31.1	21.8	11.2
Shepards Creek near Thebe	.....	.....	.....	11.0	7.4
Bairs Creek near Independence	.....	.....	.....	4.7	1.9
Georges Creek near Thebe	.....	.....	.....	9.4	7.0
Lone Pine Creek near Lone Pine	.....	.....	31.1	23.0	19.6
Tuttle Creek near Lone Pine	.....	.....	15.4	9.9	8.2
Cottonwood Creek near Olancha	.....	.....	75.8	40.4	27.8
Ash Creek near Olancha	.....	.....	8.8	10.0	5.1

* For June to December.

FLOODS IN SOUTHERN CALIFORNIA.

By A. B. WOLLABER, Local Forecaster, Los Angeles, Cal.

From December 30, 1909, to January 2, 1910, heavy rains fell in southern California. In the valleys the amounts ranged between 3 and 4 inches, while in the foothills and mountains, to the north and east, from 10 to 16 inches fell during the storm. The rain was accompanied by warmer weather than usual and the snow on the higher levels melted rapidly, causing a rapid rise in all mountain streams, which soon became raging torrents carrying a heavy flow to the valleys below. Even the small washes that have been dry for years were running bank full and while nearly all streams overflowed their banks in places the greatest damage was done by the San Gabriel River, which left the new bed formed by this stream during the flood of 1874 and returned to the old channel, inundating many acres of rich farming land and orchards and carrying out bridges in many places. The area flooded by this stream in the vicinity of Los Angeles was about 5 miles long and from $\frac{1}{2}$ to $\frac{3}{4}$ of a mile in width. Near Santa Ana several hundred acres of rich celery land were also covered and that portion of the crop not already marketed was practically ruined.

Railroads, both steam and electric, suffered the most damage, all transcontinental trains being badly delayed by washouts, while the suburban service to the flooded districts had to be abandoned. It is difficult to estimate the loss occasioned by the flood, but conservative estimates place the total in this section between $200,000 and $250,000.

No river and flood service is maintained by the Bureau in this section and no warnings were issued, except the usual rain warnings sent out before each big storm.